

Sixth Trip. (27/2/41 - 10/3/41)

Riverina, Broken Hill, Murrumbidgee.

Made one stop between Gungahlin & Gundagai & found only one *Acrida* - a *Chama* ♀ adult (green). Country so far similar to that between Canberra & Yass, namely mainly creamy, ~~very~~ light red podsolized soil, with less red-brown soil. All hilly country, no timber barriers along road (partly natural woodland, partly cleared) from ca. 3 miles before Coolac, flatish valleys of some extent appear between hills. Red soil more prominent, & ~~for~~ ^{for} 3 miles before Coolac a little self-mulching dark grey sch. associated with a creek. Gundagai 17159. 169 ^(2.) *Acrida* *Chorizandra*. From Gundagai to here road follows flood-plain of Adelong Creek. Soil greasy to light red sand, loam. 73-79 steeper hills, originally ^{more} densely timbered, still only, partly cleared in places - probably at least a partial barrier. 79-82 moderately hilly, podsolized & light red sandy loam, some richer red-brown loam. 82-86, steeper hills, prob. partial barriers. 86-99 only ^{moderately} ~~hilly~~ ^{hilly} ~~undulating~~ country appearing open to north & west. ^{same soil types} 90 Tarcutta. 99-²¹⁹ mostly less well cleared, though not much steeper. A silver-leaved *For* ~~from~~ ^{from} Ca. Tarcutta, becoming one of several common

area looked like the "white bon" of the Tannworth dist.
Same soil types 17206-214 whitish podsolized strongly,
predominating 209-212 ~~to~~ steepers, probably at least
partial barrier. 219-233 (Holbrook) flat to gently undulating,
with scattered ranges of hills (which road is able to
avoid). Soil from ca. 227 mainly light reddish sandy
loam, with "white bon" & "stringybarn" dominant.

Extensive flat country to NW from ca. 227.

238. Examined typical ^{little-grazed} clover (sown) - *Andropogon* (?) *Bothriochloa decipiens*
paddock. In 200 yd traverse found ~~ca.~~ 1 adult
Chortocites per 20 yds. Also saw 1 *Phanacridium* &
1 prob. or *A. vulgaris*. Soil ^{compact,} pale brown sandy loam-
clay loam. 239-249 moderately hilly again. Natural or
artificial open woodland. 248. In 200 yd traverse
of moderately grazed pasture, mainly *Themeda*, *Andropogon*
& *Chloris* with clover, found no *Chortocites*. *Themeda*
dominant over most of traverse. 249-275 flat to
gently undulating with ranges of hills. Open
woodland. Light brown sandy loam, "white bon"
dominant. 259. 7 *Chortocites* in 200 yd traverse
of lightly grazed pasture of almost pure *Andropogon*, with
light debris, presumably of winter & spring grasses
between plants. 270 1 *Chortocites* per 200 yds of lightly

grazed pasture of ca. equal parts *Andropogon* & sp. of *Eragrostis*, with a little *Chloris*. Also *Scirpus*.

Albany ¹²⁷⁵. From ca. 265 high timbered hills can be seen in a continuous line to SW & S at distance of ca. 20 miles. Albany itself gave the impression of being completely enclosed by timbered hills except from the NE where the Sydney road enters. Practically no cultivation between Gass & Albany.

(282)

Albany - Corowa (N. SW road) Road runs close along river for first 4 miles. 86-93 further from river, light hills, mostly steep, some timbered, to right of road *E. albens* (?) brown to red ~~soil~~ sandy loam & loam, white bon dominant.

290. 3 *Chorizanthe* in groups of clods, ^{short} pasture, clods & debris of a shot grass (spec.). A little couch. 293. Country now flat, completely open to NW, open woodland, light brown & light red hard, a little slightly greasy.

E. melliodora (?) mostly white bon & stringybark. 300 How long, 303 ^{pos. *E. woollsiana*} nl. bon & stringybark on same soils. 305. Ca. 50 *Chorizanthe* in 200 yds of ^{lightly grazed} open *Chloris* pasture on light brown hard; old cultivation paddock. Low creeping herbage, mainly *Euphorbia Drummondii* & *Euphorbia* sp. Small bare spaces up to ca 1 ft. diameter. Originally nl. bon & stringybark. 306-310 det &

hard-
integro. of pale ^{hard-}greasy + pale red - red hard, with straggly,
nl. box & little white box, latter mainly on higher ground.

1311. 4 Chortocrites on open lightly grazed pasture of ca.
equal quantities of a ^{*Heliotropium europaeum* (spec.)} ~~shrub~~-leaved dicot., clover, &
^{*Danthonia tenuis*} ~~*Danthonia*~~ ^{*Danthonia*} sp. (spec.). Very acc. Chlois truncata.

Pale red hard or hard-greasy. mainly straggly. 317 Corowa.

Album - Corowa, & particularly Havelock - Corowa was
mainly hard pale red, ca. (2). ^{A little cultivation between} Album & Corowa.

(317) Corowa - Jirilderie. 17-22 light brown & light red hard, with
nl. box, straggly & Cypress pine. 322 ca. 5, Chortocrites in
200 yds. Equal no. Chlois, *Danthonia* & *Siagrostis* sp.,
with a little clover, much spring debris, & a little
bare space. lightly grazed, beginning to dry off. nl. box - pine.

Pale brown hard. 22-33 light ~~box~~ red, brown & light
brown hard-greasy with nl. box & pine, straggly in more
well-sod acc. from 327.

low-lying parts, 333 No Chortocrites in 200 yds very
rather dm
sparse pasture, mainly various dicots, clover, &

Danthonia, with very short debris & bare spaces. On the
stock route, which here is better pastured than the
paddocks on either side, several Chem. were seen.

338. Very small patch slight on pale grey in slight
depression. 338-42 gradual emergence of pale-red.

grey slightly ~~sm~~ soil in patches of increasing size.
up to 338 cultivation for wheat extensive. Country
became progressively drier from Corowa, & overstocking
was apparently practised on the sheep-wheat farms.

1342. 4 *Chortocites* in 200 yds almost completely
dry pasture on slightly - mod. ^{pale med} sm soil. Pasture
apparently a tufty grass, a ^{??} mitchell, & a *Scirpus* or
related genus. 42-47 Same alt. sintergs. of slightly
sm - greasy med. grey and pale brown - pale & med. red-brown
hard, latter predominant. 47-53 almost pure brown
& red-brown. Strongly not seen since ca. 333, trees being
nl. box, pine & occ. bull oak. 353. 14 *Chortocites* in
200 yds of completely dry pasture of fairly dense 2ft -
2ft. 6. Thistle & debris of a short grass. Soil greasy
pale gb. Box - pine - bull oak. 55-57 trunks plain,
slightly ^{pale} sm / grey with strongly sm puffs, trees on
lighter parts. 57-60 mainly greasy gb. & brown (4x4-7)
in thick puffs. 60-65 alt. sintergs. of creamy brown &
hard red-brown. 362. No *Chortocites* in 200 yds of
somewhat swampy area, now quite dry, pitted
by feet of cattle. Greasy soil, pasture mainly
Scirpus or related genus, almost completely dry.
Box - pine, 65- ^{rather low} greasy brown w. a new / spreading

gun with stump base & smooth pale above. Myall etc.
Tendency to strongly sm. puffs, well-dev. in park, esp.
68-71, 17372. 7 Chorizandra in woods. completely dry
pasture of yf. thistles, grass debris & bare space.
Soil brown ^{etc.} greasy with strongly sm. puffs. Treeless,
but trees, already noticed, on fringe. A few Leptosia.
72-77 alto sim. to 68, brown & red-brown, all greasy,
with puffs in various degrees of dev. The Treeless in
greater part, elsewhere myall, stunted w. box,
bull-oak. No pine since ca. 65. 77-83 (Gerilderie)
red-brown greasy (4), mostly treeless, quite numerous
myall, practically no puff-formation. Slightly
less dry from ca. 75.

Summary, Yarr - Albany The whole stretch is
typical Tableland country, with exception of about
6 miles on either side of Holbrook, which represents
a SEastly tongue of the Riverina plain. Soil podsolized
with paler types of red-brown in places. Only
exception is 3 miles E of Coolac where there is a
small patch of ~~heavy~~ sm. associated with a creek.

Summary, Albany - Gerilderie. Similar to Albany
country for first 11 miles, then flat & open to Riverina

7 miles before Howlong. The bon starts 3 miles beyond Howlong (typical loc of Riverina compact soils), and pine almost immediately NW of Corowa. Corowa is in typical Riverina country. At 21 miles NW of Corowa the first soil begins as patches, not very heavy, with hard-grassy predominant, ^{somewhat} mixed country for 9 miles. Then 8 miles of hard & grassy, 2 miles of mixed, & 8 miles of hard-grassy. Then ca. 12 miles of mixed ^{puffy} country, largely treeless, but no even moderately large areas of heavy soil. Finally 6 miles of greasy red-brown, similar to some round Nyngun. The more or less treeless plain may be considered to begin ca. 11 miles from Jerilderie, while puffy country is dominant from ca. 18 miles from Jerilderie. The latter is apparently the limit shown by Preacott.

(383)
Jerilderie & N 173 83 - 400 Greasy, red-brown (4) with strong tendency to clay-pans - no puffs. Probably originally almost treeless, many trees scattered in all & spreading gum. Little deep saltbush grows in horse paddocks. No Chorizandra in 200 yds completely dry pasture of dead dicot. ca. 8 ins high ^{low} & debris. 90 - 400 (open to Creek) Same country.
402 No Chorizandra in 200 yds completely dry pasture of

fairly dense grass, now ca 8 in., probably largely barley
grass. Soil pale grey greasy - slightly sm. ~~from~~ 17400 - 412 alts
intergs. of red-brown greasy & gb. greasy - slightly sm., mainly
former. Myall very numerous from Yucca Creek. Other
herb rare. 410. No Chort. in 200 yds almost completely
dry pasture - saffron thistle 2 ft., grass debris ca. 6 in.
Occ. green Solanum. Soil gb. greasy, occ. slightly sm. 412 - 422
alts. intergs. of red-brown greasy with myall & red-brown
hard-sandy with pine, hakea, supplejack & bull-oak.
420. 1 Chort. in 200 yds completely dead very heavily grazed
pasture of miscellaneous debris, not more than ca. $\frac{1}{2}$ in
high on av., w. numerous smallish bare spaces. Myall,
some hakea, some pine. 22-27 alts intergs. of greasy
red-brown and grey greasy - mod sm., with myall.
27-39 alts intergs. of red-brown greasy w. myall & red-brown
hard-sandy w. pine, hakea, supplejack & bull-oak, hard-sandy
strongly dominant. (This is along Dackington Pt. Rd.
from 24. 429 1 Chort. in 200 yds. very heavily grazed ~~here~~ ^{short}
pasture, dry but showing a little green pick, prob.
mostly Chloris. Soil red-brown greasy & green - slightly
sm. gb. Occ. puffs. Consist. bare space. 34-35 Couple of
small stretches of mod. sm. grey. 439. 7 Chort in 200 yds

heavily grazed very short pasture showing fair green/pink
of chloris. ^{very low} grass debris, consist. bare space. Greasy red-brown
(4) with occ. rather small puffs. Myall. Return along
same road. 17454 back to corner turn-off. 54-65 alts &

intergs. of greasy red-brown myall & hard-sandy red-brown
with pine, hakea, etc., latter type predominant. 465
Kochia tomentosa

9 Chort. in 200 yds very lightly grazed pretty green pasture
of chloris, *Panicum decompositum* sp. (spce.) & a creeping perennial
saltbush (ca. equal parts.) Occ. small rolling patches.

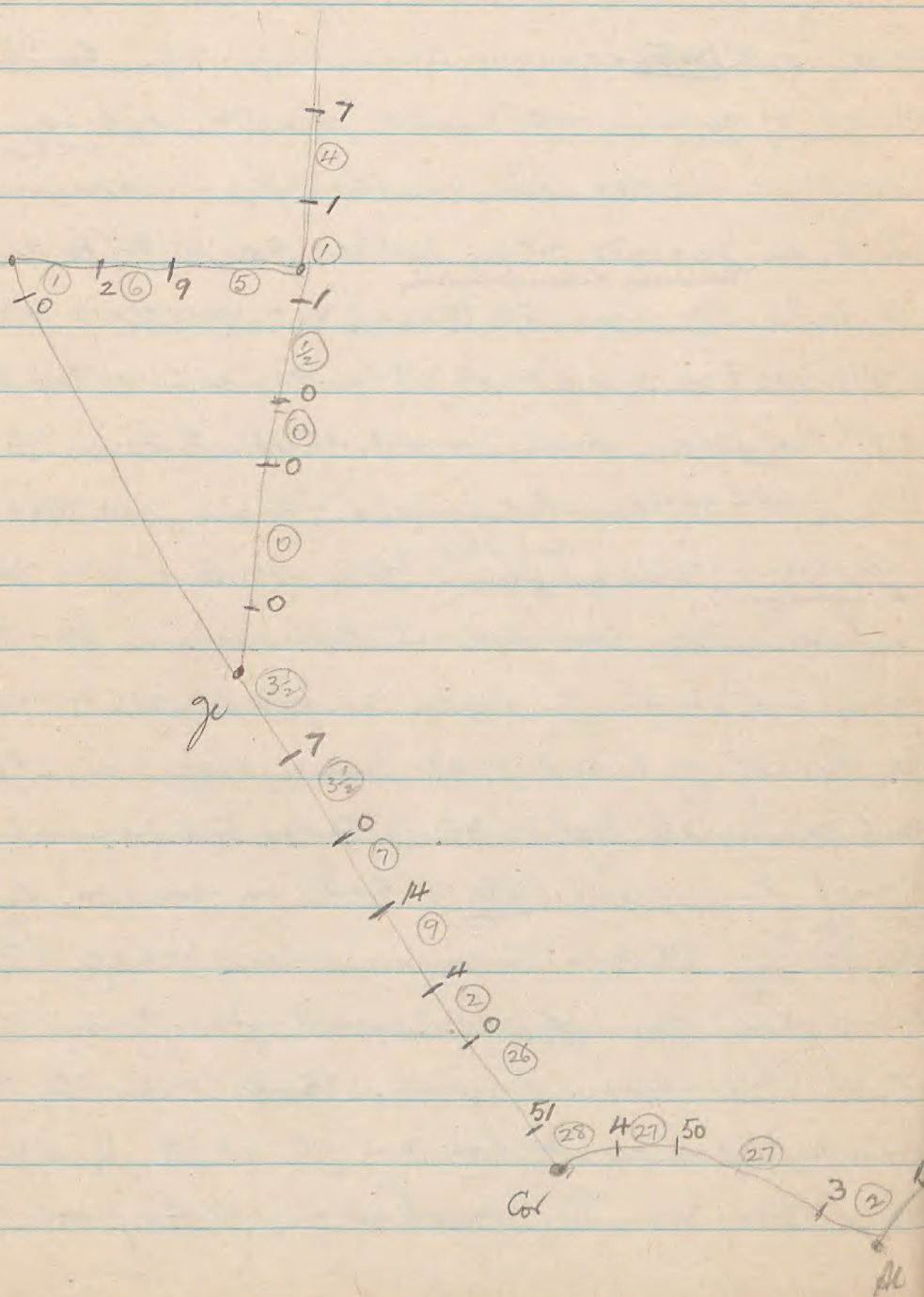
Red-brown greasy with myall. A little debris, a little bare
space. 65-69 (Coombil entrance) some good short term alts
of red-brown greasy ^{mod.-heavy} grey, with myall quite thick.
E. bicolor (?)

"Black box", like Coolabah, in depression. 69-77 (Coombil
homestead) mainly greasy red-brown w. numerous myall.
Occ. small patches mod.-heavy ^{grey} grey. Mainly "black
soil ca. 1/2 mile N x NW + NE of Coombil homestead. 85 return

to road, turn right. 490 2 Chort. in 200 yds. lightly grazed
pretty green
pasture of chloris, *Solanum* & low hebage (Mabwa etc.)

on slightly ^{mod.} grey soil with few small puffs. Mod.
amt. bare space. Myall. 85-90 mainly red-brown
greasy short w. patch on grey at 89. Quite numerous

Chort. seen here, the count at 490 being prob. not representative



500: *Kochia aphylla*

17502

[illegible]

15-16 The plant is a small herbaceous plant with a single stem and a few leaves. It is a very common plant in the area and is often found in the same place as the other plants.

Chenopodium nitrovariacum?

Chenopodium nitrovariacum 17634. 1 Chert. in 200 ft. from the surface. The plant is a small herbaceous plant with a single stem and a few leaves. It is a very common plant in the area and is often found in the same place as the other plants.

Plants of the same species are found in the same place as the other plants. The plants are very common in the area and are often found in the same place as the other plants.

The plants are very common in the area and are often found in the same place as the other plants. The plants are very common in the area and are often found in the same place as the other plants.

Atriplex stipitata (?) The plants are very common in the area and are often found in the same place as the other plants. The plants are very common in the area and are often found in the same place as the other plants.

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Danthonia sp.

lang : English

161.

1796.

some

(5)

(6)

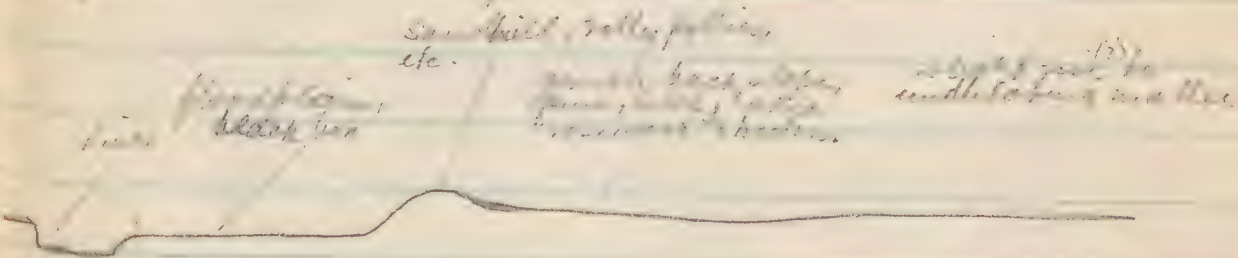
743

The flood plain is green, slightly sw. from 803,
too, irrigation crops appear. From Barro Colorado
these are almost continuous 17838. Wentworth.

Apparently the general nature of the soil by
can hardly be determined is from high water is
largely follow the river. From Barro Colorado first
19 miles are under influence of river. Then we
have a stretch partaking of all three of the
river - low, middle & high water zones. The leaving
is pure middle ca. 9 miles from Barro Colorado.
From Barro Colorado to 10 miles north middle is pure
everywhere beyond reach of the river, the soil
becoming progressively sandier, while ca. 9
miles beyond in the parallel river shells
appear with water retreating. However this
is just the stretch which is flushed from the
river, it is not possible to say when the
soil shells actually began.

Wentworth (29) - Roone (24) 39-61 miles Barro Colorado
This all is a black soil, & although in places, in
places - light, W. Roone Barro Colorado ¹⁰⁰ Barro Colorado
hill up with Barro Colorado a few Barro Colorado. Barro Colorado

with open black bar. Very rare. Indeed, said to be
 of typical form, but more frequent ^{hardly, rather, very red} in the
 black bar, with or without fine. The color changing
 the broadening of the black bar. The color changing
 the color of the small country, being, and
 greenish, with some and brown. The color
 from the north to is 975. The color is roughly
 represented as follows:-



Some times, especially, some of the color of the
 of the color. This seems to be matter in the
 color side of the color. I examined a
 specimen of the color. It is similar to the color of the
 color. It is similar to the color of the color. It is similar to the color of the color.
Eragrostis setifolia *Atriplex spongiosa*
 color of the color. It is similar to the color of the color. It is similar to the color of the color.
 color of the color. It is similar to the color of the color. It is similar to the color of the color. 18007.

1862: The year of the great drought.
1863: The year of the great famine.

1892. *Sept. 10.*

1897. The above is a list of the
 names of the persons who
 have been ~~admitted~~ ^{admitted} to the
 office of the ~~Secretary~~ ^{Secretary} of the
 Board of Education, since the
 first of January, 1897.

Acacia aneura var.

34 continued down to the base. 37 here became
a fine thin line of timber giving a nearly flat
plate of wood about 20 ft. long. Soil

Association with the first group of 18050.

[illegible]

This stretch as a whole is app. in the section between the salt lake & Lake Zouren. Leaving out of account Lake Zouren, we have probably ca. 126 miles of lakes about, with about 1/2 salt lake & 1/2 fresh mixed salt & fresh. The latter is in the (2) Co. 13 miles in which salt is about 1/2 very sparse & about 1/2 salt but on fairly level, the

1871

to dominant with very little grass. (3) ca. 10 mi. less
but less grass - (same amount, ~~amount~~ very sparse
to ~~extensive~~ end, with but occ. in eastern
part. (4) ca. 2 miles from West-holmes, the former
dominant on the slopes, the latter, on ^{open} highest ground
in ~~the~~ woods on the ~~cloning~~ summit. (5) ca. 12
miles from ~~the~~ ~~cloning~~ with ~~the~~ ~~cloning~~ & ~~cloning~~
S. - ~~cloning~~ at first, but ~~cloning~~ ~~cloning~~
towards B. H. prob. by clearing. The soil on the face
appearance is identical everywhere, a red so. bl.
surface with ~~red~~ ~~cloning~~ face.
(18083) *Tribulus terrestris*

18083 *Tiraphis mollis*

18083 *Muraphis mollis*

Kochia triptera, *Kochia tomentosa*?

(afterwards) 93. Below them are 77 bones - some of
the largest & many of longer shape - ~~some~~
with bones of skull ~~also~~ to which they join. 104.

18119 it is a small tree
leaves to return, gradually, become
numerous, large, like the right side of the
20th. The leaves are like the right side of the

Acacia aneura

36 (from 1st) 32 (from 1st) 32 (from 1st) 32 (from 1st)
37 (from 1st) 32 (from 1st) 32 (from 1st) 32 (from 1st)

Heterodendron olacifolium

37 (from 1st) 32 (from 1st) 32 (from 1st) 32 (from 1st)
38 (from 1st) 32 (from 1st) 32 (from 1st) 32 (from 1st)

Cassia Sturtii

Exemphila Duttonii

Exemphila Sturtii

62-63 St. St. St.

[illegible]

Acacia homalophylla (?)

[illegible]

337-39.

Schreibung des o-farbenen Hais, Rose, 1899 33/-34.

well-dw. puff-depression complex on brown soil.
Very good ^{Grass} green pasture, very little grazed. Photo 7 of
puff, depression shelf, 8 of depression (yungambell,
Chloris, Danthonia), 9 of puff (small yungambell, Solanum,
Sida, Convolvulus), 10 of shelf (Danthonia) 11 of general
view, ^{black box} ~~coast~~ along watercourse in background.

Spec. of yungambell. 12 Chot/roops 18675-81 Greasy & hard
pale red-brown over low ridge with pine, nl. box; &
stringbark(?). 81-85 alts of heavy sm. & hard greasy.
85-97 (harrauderia) mainly pale grey, greasy near rails,
with gum & stringbark, unclaired in places. Partly has
pale-red-brown with pine nl. box. 92-94 Alts with
med. grey puffy.

⁽⁶⁹⁹⁾ harrauderia + Hume Highway: 699-707 Hard & greasy
pale red-brown - pale gl. with nl. box & pine. ^{same.} 707-711
brown, ^{very} puffy soil, ^{green} Chloris pasture, little grazed; dead
saffron thistle on puffs. 708 39 Chot/roops. 711-21
greasy & hard ^{pale} red-brown - gl. with nl. box, pine & occ.
bull oak. 21-30 alts & subsp. of heavy grey & gl. sm.,
most of it with very well-dw. puffs, & greasy-hard,
mainly former (flat, few trees & my all occ.) 30-46
greasy & (mainly) hard, pale red-brown & red-brown ^{hard} with

nl. kon dominant plus pine, occ. hull oak & occ.
stringy bark ^{Gently undulating} 19746-51 Gently hilly. Mainly rich red-brown
hard, with nl. kon, white kon, esp. toward tops of
ribs, & pine, occ. hull oak. 51-52 Patch of creamy-
not sun. gb - grey. 52-59 (leaves) Through gb. creamy &
hard to pale red-brown hard, with white kon, nl. kon &
stringy bark in ca. equal nos. No pine. ~~the~~ leaves
itself is on a fine - slightly sun. flat. 60-72 Red-brown
- gb. hard & creamy. nl. kon, white kon, stringy. 72-77
hilly, red-brown hard, with slight tendency to podaric-
white kon & stringy (Hume Hume)
ation in parts. 77-92 Pale red-brown & red-brown hard,
with stringy, green, white kon & nl. kon. Occ. gb. creamy.



See also material
relating to bulletin
186 - Pl. 2 (b)



25 miles from Narrandera on road to Hay. General view of typical Puffy country under dense grass growth of pasture. Photo shows numerous puffs & depressions, the latter carrying X 11 heavy fies.

X 10.

"Puffy" country, 25 miles from Narrandera on road to Hay. Photo shows vegetation of shelf: Danthonia sp.

Y 10.

March 1941

K.H.K.

14 miles N of Pooncaira on road to Merindie. Red sand hill lining the Darling flood plain. Rolly, pally, & fluffy grass. Typical habitat for Urisa guttulosa.

"Puffy" country, 25 miles from Narrandera on road to Hay. Photo shows vegetation of depression: Garganhill (Elyon sp.) Chloris truncata & Danthonia sp.

X 8.

March 1941

K.H.K.

See also material relating to bulletin 186 - Pl. 2 (b)

"Puffy" country, 25 miles from Narrandera on road to Hay. Photo shows vegetation of puff: Stylidium lineare, Sida, Convolvulus, small Garganhill.

X 9.

9 miles from Booligal on road to Hay. Bassia-saltmarsh mesembrianthemum association on brown glassy soil.

X 6.

March 1941

K.H.K.

25 miles from Balranald on road to Wentworth. Mallee-spinifex association on loose sandy soil.

Y 7.

March 1941

K.H.K.

19 miles from Merindie on road to Broken Hill. Association of Casuarina sp., mulga, hakea, shrubby saltmarsh grasses.

Y 11

March 1941

K.H.K.

63 miles from Broken Hill on road to Wilcannia. Acacia rodens Association of hakea sp. Sparse grass pasture.

X 2.

March 1941

K.H.K.

ca. 30 miles from Wilcannia on road to Broken Hill. Shrubby saltmarsh association with leopardwood.

X 3.

March 1941

K.H.K.

Chenopodium sp. on grey-brown sandy loam. Black box in background. Chloris truncata, with a little Paritium sp. & rolly-pally.

Y 1.

33 miles W of Deniliquin on Moulamein road.

March 1941

K.H.K.

40 miles from Moulamein on road to Balranald. Hakea sp. frequent in this region.

Y 6

March 1941

K.H.K.

25 miles from Wentworth on road to Pooncaira. Typical large mallee, no undergrowth.

Y 9.

March 1941

K.H.K.

24 miles from Merindie on road to Broken Hill. Mulga typical of this region (not shown size) Bassia & grass.

Y 12

March 1941

K.H.K.

9 miles from Booligal on road to Hay. Collecting site for several spp. Bassia-saltmarsh-mesembrianthemum association on brown grassy soil.

X 5.

38 miles W of Moulamein on road to Balranald. Very mixed association of mallee (right), bilah (left), pine, white hakea (background) & Chenopodium in fore-ground.

Y 4

March 1941

K.H.K.

38 miles W of Deniliquin on Moulamein road. Medium-sized saltbushes on heath plain. Very pale grey grassy soil, no grass.

Y 3.

March 1941

K.H.K.

40 miles from Moulamein on road to Balranald. Hakea sp. frequent in this region.

Y 5.

March 1941

K.H.K.

25 miles from Balranald on road to Wentworth. Spinifex in ass. with mallee on red sandy soil.

Y 8.

March 1941

K.H.K.

55 miles from Wilcannia on road to Swan hole. Tall "Gramophila" frequent in this region (not shown size) grass-bassia pasture.

Y 12

55 miles from Wilcannia on road to Swan hole. Tall "Gramophila" frequent in this region (not shown size) grass-bassia pasture.

X 4

March 1941

K.H.K.

55 miles from Broken Hill on road to Wilcannia. Open mulga association.

X 1.

March 1941

K.H.K.

Ca. 36 miles W of Deniliquin on Moulamein road. Chenopodium sp. & "Dobbo bushes" with Chloris truncata on pale grey moderately to heavy self-mulching soil.

Y 2.

March 1941

K.H.K.